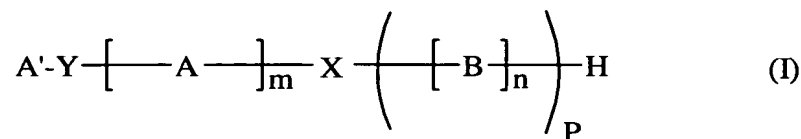


**We claim:**

1. A mixture comprising a surfactant and a cosurfactant, wherein the cosurfactant used is an amphiphilic polymer with the structural formula

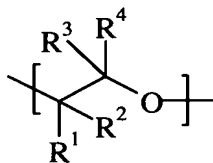


in which

A' is an unbranched or branched alkyl, cycloalkyl, aryl or aralkyl radical having 1 to 60 carbon atoms,

Y is S or O,

A is a structural unit with the formula

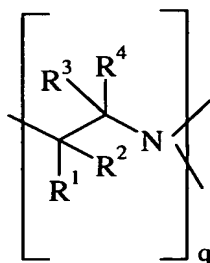


in which

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> independently of one another, are the substituents hydrogen, methyl, ethyl, n-propyl, isopropyl, octyl or phenyl, with the restriction that at most three of the substituents R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen,

m is a running number in the range from 10 to 300,

X is a structural unit with the formula



in which the substituents

- 5       $R^1, R^2, R^3$  and  $R^4$       independently of one another, are each hydrogen, methyl, ethyl, n-propyl, isopropyl, octyl or phenyl,

$q = 0$  or  $q = 1$ ,

- 10      B      is a monomeric subunit based on ethylene oxide or a mixture of ethylene oxide and propylene oxide,

n      is a running number in the range from 20 to 500 and

- 15       $p = q + 1$ .

2.      A mixture as claimed in claim 1, wherein A'-Y is a monofunctional unbranched or branched alcohol or thiol radical having 8 to 30 carbon atoms per molecule.

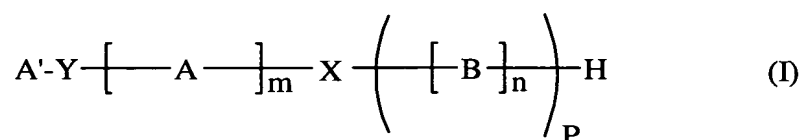
- 20      3.      A mixture as claimed in either claim 1 or 2, wherein the structural unit A is formed from one or more of the following monomers: propene oxide, 1-butene oxide, 2,3-butene oxide, 2-methyl-1,2-propene oxide (isobutene oxide), 1-pentene oxide, 2,3-pentene oxide, 2-methyl-1,2-butene oxide, 3-methyl-1,2-butene oxide, 2,3-hexene oxide, 3,4-hexene oxide, 2-methyl-1,2-pentene oxide, 2-ethyl-1,2-butene oxide, 3-methyl-1,2-pentene oxide, decene oxide, 4-methyl-1,2-pentene oxide, styrene oxide or  
25      from a mixture of oxides of industrially available raffinate streams.

4.      A mixture as claimed in any of claims 1 to 3, wherein the running number m assumes a value in the range from 50 to 250, preferably from 60 to 160.

5. A mixture as claimed in any of claims 1 to 4, wherein the running number n assumes a value in the range between 50 and 300.

6. A mixture as claimed in any of claims 1 to 5, wherein B is an ethylene oxide/propylene oxide mixture containing 0 to 50%, preferably 5 to 20%, of propylene oxide.

7. A process for the preparation of an amphiphilic polymer with the structural formula (I)

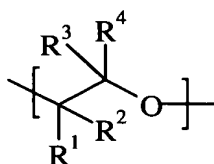


in which

A' is an unbranched or branched alkyl, cycloalkyl, aryl or aralkyl radical having 1 to 60 carbon atoms,

Y is S or O,

A is a structural unit with the formula



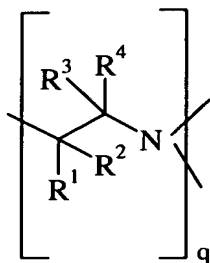
in which

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> independently of one another, are the substituents

hydrogen, methyl, ethyl, n-propyl, isopropyl, octyl or phenyl, with the restriction that at most three of the substituents R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen,

m is a running number in the range from 10 to 300,

X is a structural unit with the formula



in which the substituents

$\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  independently of one another, are each

hydrogen, methyl, ethyl, n-propyl, isopropyl, octyl or phenyl,

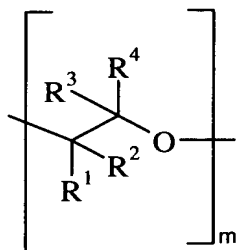
$q = 0$  or  $q = 1$ ,

B is a monomeric subunit based on ethylene oxide or a mixture of ethylene oxide and propylene oxide,

n is a running number in the range from 20 to 500 and

$p = q + 1$ ,

which comprises reacting an unbranched or branched monohydroxyalkyl, -aryl or -aralkyl alcohol  $\text{A}'\text{-OH}$  or a corresponding thiol  $\text{A}'\text{-SH}$  with a monomer which forms the structural unit



and reacting

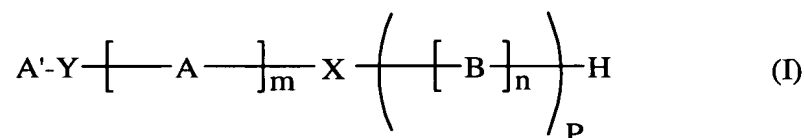
- the terminal OH group directly with ethylene oxide or a mixture of ethylene oxide and propylene oxide or
- the terminal OH group firstly to give a primary or secondary amine and then with ethylene oxide or a mixture of ethylene oxide and propylene oxide.

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8. The use of a mixture as claimed in any of claims 1 to 6 for stabilizing emulsions, preferably microemulsions.

10

9. A microemulsion comprising a surfactant and cosurfactant, wherein the cosurfactant used is an amphiphilic polymer with the structural formula



in which

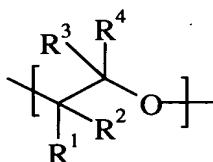
15

A' is an unbranched or branched alkyl, cycloalkyl, aryl or aralkyl radical having 1 to 60 carbon atoms,

Y is S or O,

20

A is a structural unit with the formula



in which

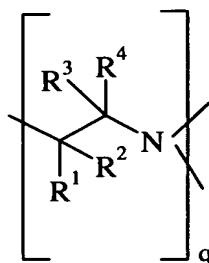
25

R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> independently of one another, are the substituents hydrogen, methyl, ethyl, propyl, octyl or phenyl, with the restriction that at least two and at most three of the substituents R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are hydrogen,

30

m is a running number in the range from 10 to 300,

X is a structural unit with the formula



in which the substituents

$R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$  independently of one another, are the substituents

hydrogen, methyl, ethyl, propyl, octyl or phenyl,

$q = 0$  or  $q = 1$ ,

B is a monomeric subunit based on ethylene oxide or a mixture of ethylene oxide and propylene oxide,

$n$  is a running number in the range from 20 to 500 and

$p = q + 1$ .

10. A microemulsion as claimed in claim 9, wherein A'-Y is a monofunctional unbranched or branched aliphatic alcohol or thiol radical having 8 to 30 carbon atoms per molecule.

11. A microemulsion as claimed in claim 9 or 10, wherein the structural unit A is formed from one or more of the following monomers: propene oxide, 1-butene oxide, 2,3-butene oxide, 2-methyl-1,2-propene oxide (isobutene oxide), 1-pentene oxide, 2,3-pentene oxide, 2-methyl-1,2-butene oxide, 3-methyl-1,2-butene oxide, 2,3-hexene oxide, 3,4-hexene oxide, 2-methyl-1,2-pentene oxide, 2-ethyl-1,2-butene oxide, 3-methyl-1,2-pentene oxide, 4-methyl-1,2-pentene oxide, decene oxide, styrene oxide or from a mixture of oxides of industrially available raffinate streams.

12. A microemulsion as claimed in any of claims 9 to 11, wherein the running number m assumes a value in the range from 50 to 250, preferably from 60 to 160.
13. A microemulsion as claimed in any of claims 9 to 12, wherein the running number n assumes a value in the range between 50 and 300.
14. A microemulsion as claimed in any of claims 9 to 13, wherein B is an ethylene oxide/propylene oxide mixture containing 0 to 50%, preferably containing 5 to 20%, of propylene oxide.
15. The use of a mixture as claimed in any of claims 1 to 6 or of a microemulsion as claimed in any of claims 9 to 14 as detergent, emulsifier, foam regulator, wetting agent for hard surfaces or as reaction medium for organic, inorganic, bioorganic or photochemical reactions.
16. The use as claimed in claim 15 in detergents, surfactant formulations for the cleaning of hard surfaces, humectants, cosmetic, pharmaceutical and crop protection formulations, paints, coatings, adhesives, leather degreasing compositions, formulations for the textile industry, fiber processing, metal processing, food industry, water treatment, paper industry, fermentation, mineral processing, fire protection or in emulsion polymerizations.
17. A detergent, cleaner, wetting agent, coating, adhesive, leather degreasing composition, humectant or textile treatment composition or a pharmaceutical, crop protection or cosmetic formulation, in particular sunscreen, skincare or hair styling composition, shower gel, shampoo, bath additive or scent oil, comprising, as well as customary ingredients, a mixture as claimed in any of claims 1 to 6 or a microemulsion as claimed in any of claims 9 to 14.